

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Abreo et al.

Serial No.: 09/931,186

Filed: August 17, 2001

For: Peptide Mutant of Human ERAB or HADH2,  
its X-ray Crystal Structure, and Materials  
and Method for Identification of Inhibitors  
Thereof



Art Unit: 1646

Examiner: To Be Assigned

Atty. Docket: 0125-0049US

TECH CENTER 1600/2900

NOV 23 2001

RECEIVED

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Listed on the accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that an exhaustive search has been made, or that there does not exist information more material to the examination of the present patent application. The Examiner is specifically requested not to rely solely on the material submitted herewith.

- ☒ 1. This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.
- ☐ 2. The Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56 (c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ c. Attached is our check no. \_\_\_\_ in the amount of \$180.00 in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Applicants hereby petition that the Information Disclosure Statement be considered. Attached is our check no. \_\_\_\_\_ in the amount of \$130.00 in payment of the fee under 37 C.F.R. § 1.17(i)(1).
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐b. I hereby certify that no item of information on this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).


- ☐4. Relevance of the non-English language document(s) is discussed in the present specification.
- ☐5. The document(s) was/were cited in a corresponding foreign application. An English language version of the foreign search report is attached for the Examiner's information.
- ☐6. A concise explanation of the relevance of the non-English language document(s) appears below:
- ☒7. The Examiner's attention is directed to co-pending U.S. Patent Application No. 09/931,166, filed August 17, 2001, which is directed to related technical subject matter. The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to that application now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination.
- ☐8. Copies of the documents were cited by or submitted to the Office in Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and to indicate in the official file wrapper of this patent application that the documents have been considered.

The Commissioner is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. **50-0622**.

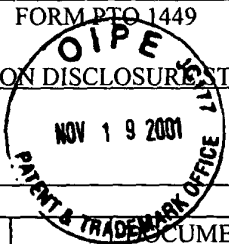
Respectfully submitted,

SHANKS & HERBERT

By:   
Christina Gadiano  
Reg. No. 37,628

Date: November 19, 2001

TransPotomac Plaza  
1033 N. Fairfax Street  
Suite 306  
Alexandria, VA 22314  
703-683-3600

FORM PTO 1449 INFORMATION DISCLOSURE STATEMENT 	ATTY. DOCKET NO. 0125-0049US	APPLICATION NO. 09/931,186
	APPLICANT(S) Abreo et al.	
	FILING DATE August 17, 2001	GROUP 1646

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE

## FOREIGN PATENT DOCUMENTS

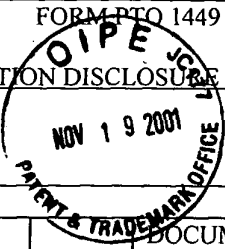
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
						<input type="checkbox"/> Yes <input type="checkbox"/> No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

		Rattan et al., <i>Ann. N.Y. Acad. Sci.</i> 663:48-62 (1992)
		Rossman et al., <i>The Enzymes</i> , Academic Press, NY, pp. 61-102 (1975)
		Saiki et al., <i>Science</i> , Vol. 239, pp. 487-491 (1988)
		Schoner et al., <i>Proceedings of National Academy of Science, USA</i> , Vol. 83, pp. 8506-8510 (1986)
		Seed, B. (1987) <i>Nature</i> 329: 840-842
		Seifter et al., <i>Meth. Enzymol.</i> 182: 626-646 (1990)
		Selkoe, <i>Annual Review of Neuroscience</i> , Vol. 17, pp. 489-517 (1994)
		<i>Sequence Analysis in Molecular Biology</i> , von Heinje, G., Academic Press, 1987
		<i>Sequence Analysis Primer</i> , Gribskov, M. and Devereux, J., eds., W.H. Freeman and Company, New York, 1991
		Sheldrick et al., <i>Methods in Enzymology</i> , Vol. 277, pp. 319-343 (1997)
		Small et al., <i>J. Neurochemistry</i> , Vol. 73, pp. 443-9 (1999)
		Smith et al., (1983) <i>Mol. Cell Biol.</i> 3:2156-2165
		Smith et al., (1988) <i>Gene</i> 67:31-40
		Smith et al., <i>J. Mol. Biol.</i> 224:899-904 (1992)
		Storey et al., <i>Neuropathology And Applied Neurobiology</i> , Vol. 25, pp. 81-97 (1999)
		Studier et al., (1990) <i>Gene Expression Technology: Methods in Enzymology</i> : 185:60-89
		Stura et al., <i>Journal of Crystal Growth</i> , Vol. 110, pp. 270 - 282 (1991)
		Tanaka et al., <i>Biochemistry</i> , Vol. 35, pp. 7715-7730 (1996)
		Thompson et al., <i>Nucleic Acids Research</i> , Vol. 22, pp. 4673-4680 (1994)
		Wada et al., (1992) <i>Nucleic Acids Res.</i> 20:2111-2118
		Wallace et al., <i>Protein England</i> Vol. 8, pp. 127 -134 (1995)
		Wilson et al., <i>Journal of Neuropathology And Experimental Neurology</i> , Vol. 58, pp. 787-94 (1999)
		Yan et al., <i>Journal of Biological Chemistry</i> , Vol. 274, pp. 2145-56 (1999)
		Yan et al., <i>Nature</i> , Vol. 389, pp. 689-95 (1997)

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO 1449 INFORMATION DISCLOSURE STATEMENT 	ATTY. DOCKET NO. 0125-0049US	APPLICATION NO. 09/931,186
	APPLICANT(S) Abreo et al.	
	FILING DATE August 17, 2001	GROUP NO. 1646

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	ISSUING DATE
	5,322,933	6/94				May 7, 1992
	5,556,778	9/96				June 16, 1995
	5,616,555	4/97				June 7, 1995
	5,872,011	2/99				June 13, 1997
	6,020,162	2/00				June 12, 1998
	6,268,479	6/01				March 12, 1997

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
						<input type="checkbox"/> Yes <input type="checkbox"/> No

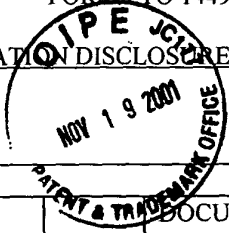
## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	✓	Altschul et al., <i>J. Mol. Biol.</i> 215:403-10 (1990)
	✓	Altschul et al., <i>Nucleic Acids Research</i> , Vol. 25, No. 17, pp. 3389-3402 (1997)
	✓	Amann et al., (1988) <i>Gene</i> 69:301-315
	✓	Ausubel et al., <i>Current Protocols in Molecular Biology</i> , John Wiley & Sons, New York, (1992)
	✓	Baldari, et al., (1987) <i>EMBO J.</i> 6:229-234
	✓	Benach et al., <i>Journal of Molecular Biology</i> , Vol. 289, No. 2, pp. 335-55 (1999)
	✓	<i>Biocomputing: Informatics and Genome Projects</i> , Smith, D.W., ed., Academic Press, New York, 1993
	✓	Bowie et al., <i>Science</i> 247:1306-1310 (1990)
	✓	Brünger, <i>Nature</i> , Vol. 355, pp. 472-475 (1992)
	✓	Brünger, <i>XPLOR Manual, Version 3.1</i> , Yale University Press, New Haven, CT (1992)
	✓	<i>Computational Molecular Biology</i> , Leszczynski, Jerzy ed., Elsevier, The Netherlands, 1999
	✓	<i>Methods in Molecular Biology, Computer Analysis of Sequence Data, Part 1</i> , Griffin, A.M., and Griffin, H.G., eds., Humana Press, New Jersey, 1994
	✓	Creighton, <i>Proteins - Structure and Molecular Properties</i> , 2nd Ed., W. H. Freeman and Company, New York (1993)
	✓	Cunningham et al., <i>Science</i> 244:1081-1085 (1989)
	✓	<i>Current Protocols in Molecular Biology</i> , John Wiley & Sons, N.Y. (2001)
	✓	Davis et al., Prevention of Chemotherapy-Induced Alopecia in Rats by CDK Inhibitors (2001) <i>Science</i> 291:134-137
	✓	de Vos et al. <i>Science</i> 255:306-312 (1992)
	✓	Devereux, J., et al., <i>Nucleic Acids Res.</i> 12(1):387-395 (1984)
	✓	Engh et al., <i>Acta Crystallography</i> , Vol. A47, pp. 392-400 (1991)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO 1449 INFORMATION DISCLOSURE STATEMENT 	ATTY. DOCKET NO. 0125-0049US	APPLICATION NO. 09/931,186
	APPLICANT(S) Abreo et al.	
	FILING DATE August 17, 2001	GROUP 1646

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
						<input type="checkbox"/> Yes <input type="checkbox"/> No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

		Ensor et al., <i>Journal of Biological Chemistry</i> , Vol. 265, pp.14888-91 (1990)
		• Furuta et al., <i>Biochemistry et Biophysics Acta</i> , Vol. 1350, pp. 317-324 (1997)
		• Ghosh et al., <i>Proceedings of National Academy of Science, USA</i> , Vol. 88, pp. 10064-10068 (1991)
		• Ghosh et al., <i>Structure</i> , Vol. 3, pp. 503-513 (1995)
		• He et al., <i>Journal of Biological Chemistry</i> , Vol. 273. No. 17, pp. 10741-10746 (1998)
		• He et al., <i>Journal of Biological Chemistry</i> , Vol. 274, pp. 15014-9 (1999)
		• Hülsmeier et al., <i>Protein Science</i> , Vol. 7, pp. 1286-1293 (1998)
		• Jörnvall et al., <i>Biochemistry</i> , Vol. 34, pp. 6003-6013 (1995)
		• Kan et al., <i>Journal of Protein Chemistry</i> , Vol. 11, pp. 467-473 (1992)
		• Kang et al., <i>Nature</i> , Vol. 325, pp. 733-736 (1987)
		• Kaufman et al., (1987) <i>EMBO J.</i> 6:187-193
		• Kissinger et al., <i>Acta Crystallography</i> , Vol. D55, pp. 484-491 (1999)
		• Kunkel, <i>Proceedings of National Academy of Science, USA</i> , Vol. 82, pp. 488-492 (1985)
		• Laskowski et al., <i>Journal of Applied Crystallography</i> , Vol. 26, pp. 283-291 (1993)
		• Lucklow et al., (1989) <i>Virology</i> 170:31-39
		• McRee, <i>Journal of Molecular Graphics</i> , Vol. 10, pp. 44-46 (1992)
		• Miroux et al., <i>Journal of Molecular Biology</i> , Vol. 260, pp. 289-298 (1996)
		<i>Molecular Cloning: A Laboratory Manual. 2nd. Ed.</i> , Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, (1989)
		• Mullis et al., <i>Cold Spring Harbor Symposium on Quantitative Biology</i> , Vol. L1, pp. 263-273 (1986)
		• Myers, E., et al, <i>CABIOS</i> , 4, No. 1: 11-17 (1988)
		• Needleman et al, <i>J. Mol. Biol.</i> (48):443-453 (1970)
		• Otwinowski et al., <i>Methods in Enzymology</i> , Vol. 276, pp. 307-326 (1997)
		<i>Posttranslational Covalent Modification of Proteins</i> , B.C. Johnson, Ed., Academic Press, New York (1983)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.